

Running head: AUTISM FIRE PROTECTION PROGRAM

Fire Prevention Criteria on which to base an Autism Protection Program

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: \_\_\_\_\_

### Abstract

The Noblesville, Indiana Fire Department did not have fire prevention material for families with autistic children. The research focused on the fact that there were no criteria to base a fire prevention program for families with autistic children. By conducting research, the Noblesville Fire Department was able to develop fire prevention education criteria that met the needs of individuals with autism. We used the action method in this applied research project. To help with the gathering of data, we asked five research questions: 1) What are the special needs of autistic children? 2) What factors affect autistic children when dealing with a fire? 3) What are the most effective alerting devices for families with autistic children? 4) What evacuation techniques practices or recommended? 5) What method of implementation for the curriculum is preferred? Following this study, the Noblesville Fire Department created written handout material and visual aids or pictures that met the needs of families with autistic children.

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## Fire Prevention Criteria on which to base an Autism Protection Program

### Introduction

Parents and caregivers across the country view safety as a significant concern whether at work, on vacation, or at home. We do this by evaluating the level of risk within the area where we live. Some risk reduction items are engineered for us, such as exits, firewalls, ground fault interrupter electrical outlets (GFI), lighting and the list goes on. However, sometimes families evaluate the level of risk at home by having to evaluate their children's risk; specifically, if the level of risk is increased by a diagnosed disease, such as autism.

Autism is a complex developmental disability that is growing in our society everyday. It could affect any lifestyle no matter the race, color or economic status. In 2007, Center for Disease Control and Prevention (CDC), released data that found approximately one in 150, 8-year-old children in the United States are diagnosed with autism.

The Columbia Encyclopedia, *Sixth Edition*, defines autism as a developmental disability resulting from a neurological disorder that affects the normal function of the brain.

Fire prevention at the Noblesville, Indiana Fire Department (NFD) is a duty that our organization strives to provide with high standards. Prevention of fires before they occur is more cost effective to citizens of Noblesville than fire suppression efforts after a fire occurs.

Educating our citizens about the importance of proper alerting devices, escape plans, contacting local 911 communication centers, the stop, drop and roll program, and the importance of being prepared in a disaster situation are educational topics we provide.

The problem is that the NFD does not have education criteria to base a fire prevention program for families with autistic children. With the growing number of children being diagnosed with the disease, the NFD is unsure about the needs of families with autistic children, and has no fire prevention criteria to serve as the basis for an education program.

The purpose of this research is to develop fire prevention education material that meets the need of families with autistic children. The action research will be used to form a basis for analysis of this problem. The research questions included the following:

- a) What are the special needs of autistic children?
- b) What factors affect autistic children when dealing with a fire?
- c) What are the most effective alerting devices for families with autistic children?
- d) What evacuation techniques are practiced, or recommended?
- e) What method of implementation for the curriculum is preferred?

### Background and Significance

Fire prevention education at the NFD is not something we limit to individuals that are part of our daily audience that can speak, hear and have no disability. Nor are the teaching methods the same today as they were, ten to twenty year ago. The NFD Public Education Division strives to reach out to target groups that are at a much higher risk for loss of life because of a fire or disaster. These programs have been developed through research and testing, so the information is current and safe for citizens and their families. Today, there are new interventions, special interest groups, specialized hospitals and many experts who help, and know how to work with children on the autism spectrum.

Individuals with autism face unique challenges in a fire emergency. Some individuals with autism retreat deeper into their burning home to avoid the noise of the smoke detector. Some run from firefighters trying to save them, or refuse to leave the home because their senses are overloaded. The chaotic events of a fire can even cause a child with autism to run back into a burning structure seeking the comfort of a safe place, like their bedroom.

When talking about autism, it should be understood that there are different levels and corresponding abilities throughout the spectrum. In 2005, Autism Spectrum Disorder (ASD)

published a report on the different levels of the spectrum. People diagnosed with Asperger's Syndrome exhibit a mild form of autism, tending to isolate themselves socially, and have some trouble with verbal communication. While on the opposite side of the spectrum, a person who has autism, but is not considered high functioning, would be classified as exhibiting Pervasive Development Disorder (PDD). A High-Functioning autistic person has normal learning and cognitive skills. However, this person initially struggles with language, but with practice and therapy becomes proficient. Rett's Syndrome is on the ASD and only affects females. Though this diagnosis is rare, this disorder starts with hand wringing movements that are so dramatic that the child may have problems feeding themselves.

In April 2009, the Hamilton County Autism Support Group (HCASG), *Helping Families in Central Indiana*, founder, Jane Grimes, reported that 67 new cases of autism are diagnosed everyday. That equates to one every 20 minutes and statistics show that boys are four times more likely to be diagnosed with ASD. HCASG further reported the current number of children with autism enrolled in our area school systems was as follows: Sheridan Schools, 11, Hamilton Heights Schools, 43, Westfield Washington Schools, 117, Noblesville Schools, 141, Carmel Clay Schools, 248 and Hamilton Southeastern Schools, 347.

In August 2008, Fighting Autism published a report, *Autism Prevalence in Public Schools for Eight Year Olds in 2007-2008 School Year*. The research showed the number of cases of autism per 10,000 births. Indiana and Rhode Island were tied for fifth in our nation, recording 1 in every 117 children born are being diagnosed with ASD. The states faring worse than Indiana and Rhode Island were Minnesota, 1 in 74 children, Maine, 1 in 77 children, Oregon, 1 in 87 children, and Connecticut, 1 in 112 children.

In April 2009, Fire Engineering published an article, *Autism Awareness for Responders*. The article referenced fire department contacts with autistic children. In one example, a 13-year-old

boy refused to escape a fire with his family; his body was later found behind the bathroom door. In another example, a 10-year-old boy was safely removed from his burning home, but later ran back inside the burning building and died in the fire. It goes on to state that emergency responders will have 7 times more contact with people with autism than the typical citizen.

When speaking with Brian Ketzner, Family Mentor with Indiana Resource Center for Autism (IRCA), about fire prevention for individuals with Autism, (personal communication, May 4, 2009) he said:

“You must understand that families and individuals with autism have evaluated their risk levels for every aspect of autistic person’s life. Though they may have determined that the top risk factor for a child with autism is flight or escape, a fire emergency is also up there on the list. A sound of a smoke alarm is not a pleasing sound to any individual, but to an autistic individual this can cause chaotic. Early detection fire alarms sound could possible make the emergency worse then in needs to be. Practice, practice, practice the fire emergency and the your escape routes over and over. Practice the normal routing of escaping, and then practice the non-routine, an alternative route. Through this practice and setting off the smoke alarm my be chaotic and possible cause the person to escape or run my not be a bad alternative to dieing in a fire”.

It is imperative that the NFD address the fire safety issues of families dealing with ASD in our community. As it is clearly stated in the above reference material, this group of people are at high risk to lose their lives or suffer significant injuries from a fire. In the fire service, we are a very reactive organization. We develop different techniques for fighting fires. We correspond with fire chiefs and health and safety personnel, so that a specific injuries or illness issues do not happen again. When we prepare fire prevention material for the public, we should be aware of our demographics, and try to meet the needs of individuals with a disability.



The United States Fire Administration (USFA) can help the NFD follow the fire operational objectives. A multi-hazard risk-reduction plan should provide fire prevention education material that meets the needs of families with autistic children. This linkage may be drawn by connecting the increased life safety issue that people with autism are subject to, and the desire to provide the proper fire safety material to meet their needs. The National Fire Academy's (NFA) Executive Analysis of Community Risk Reduction (EACRR) course curriculum concept of diversity as a fire service resource can also help the NFD research. With the help of these documents, the NFD can help prevent harm by hopefully mitigating the effects of fire on individuals and families dealing with autism.

### Literature Review

The literature review is based on research obtained from the United States Census Bureau (U.S. Census Bureau), Project Lifesaver International, Autism Society of America (ASA), The Autism Society of Maine (ASM), Autism Society Canada (ASC), The Hamilton County Autism Support Group (HCASG), Riley Hospital for Children, American Academy of Pediatrics, Pennsylvania Premise Alert, Living-with-Autism, National Fire Alarm Code and My Precious Kids. While an exact match was not found, the topic, documents and other research within the field were beneficial.

To establish a foundation, or identify an approximate number of people in our community with a disability, the United States Census Bureau (U.S. Census Bureau) provided tabulation by zip code. The 2000 Census showed that Noblesville had a total population of approximately 42,109 with approximately 5,434 people reporting a disability. These statistics do not identify each specific diagnosed disability. Nevertheless, it does show that a significant number of people within our community have a disability. The NFD is located in the center of Hamilton

County, just north of Indianapolis, Indiana. Our fire jurisdiction covers 56 square miles of the county.

To give a perspective about the special needs of children with disabilities, which includes autism, the children's book *Howard the Fish*, (Shores, 2008) demonstrates that special needs are not strictly for autistic children, but for all children. The fish, Howard, has his own special needs including water, and someone to feed him, all living in a fish bowl that makes his perspective of the world unique. The book gives the message that no matter what the special need is, or how the world is viewed, children should not be labeled as autistic, but instead, as a child who can prosper in this world.

To better understand as a family dealing with an autistic child, the manual *Next Step, what to do after the diagnosis*, by Stacie Pozdol, Naomi Swiezy, Riley Hospital for Children, Christian Sarkine Autism Treatment Center and Child and Adolescent Psychiatry (2007), outlines a series of steps families should take to provide resources for a child or family member with ASD. One of the first steps after the diagnosis is to learn as much as possible about the specific autism that affects the child. A wealth of information about the ASD can be found on the internet, at the library and numerous resource centers. Next, address how the diagnosis will affect everyone in the family and social circle, including caregivers, educators and neighbors. The family needs to realize that ASD affects everyone in the home. Collectively, resources can be provided to accommodate the needs of everyone by insuring that the family is not separated from the rest of the world. Realize that this cannot be done alone. Find sources of support, such as family and friends who can help with tough times and tough situations. As an aide, create binders with all the child's evaluations and information given to you. Learn what assistance is available for the child through insurance, Medicare, and what legal rights pertain to the situation, and be sure to network with area professionals, specifically those who are involved in the child's education, and

public safety. Finally, carefully determine the child's needs and organize a strategic plan for success.

Preparing the home for an autistic child can be challenging, beyond the basic safety precautions that may occur normally in any home. A child or family member with autism may not be able to remember or understand the dangers of certain actions without consistent training and interventions. In 2005, Autism Society Canada (ASC) posted a report titled *Tips from Parents of Children with ASDs*. It pointed out that modifying the home where a child with ASD lives may be more necessary than in other situations. Many children with autism have serious behavioral problems, which can put the child and others at risk. To make a home safer for this group, recommendations include arranging furniture to prevent throwing or sweeping objects off surfaces and placing furniture in positions where climbing cannot occur and where top-heavy items cannot fall. Locks, gates and barriers can help prevent falling down stairs, escaping from the home, climbing out windows and limit access to areas where injuries could happen. Some recommendations to limit these instances are; contacting the local fire department before putting in place interior door locks. This could cause potential problem should a fire emergency occur. Do not leave curtain or blind cords hanging where the child can reach them, as they may try to climb, or play with the cord, at which time, strangulation could occur. Secure all potentially dangerous items. Children with autism may be very curious and interested in how things work. Keep cabinets with cleaning items locked. Be sure to limit the number of candles in the home and keep matches and lighters out of sight. When protecting a home from fire, try to teach the child the rules to follow for fire safety. Have regular fire drills. Utilize photographs, words on signs about touching fire and fire alarms, and about smoke and other prevention items to help with safety plans. Practicing an escape plan monthly, in conjunction with fire alarm activation in the home will help with the recognition of what to do when the alarm sounds.

In September 2008, the Autism Society of America (ASA) published a report titled *Safety in the Home*. For parents of “typical” children, safety precautions around the home are necessary for a few years until the child grows and develops. However, a parent of a child with ASD will confirm that it can be a very difficult times. A child with autism can engage in many unsafe acts, such as throwing utensils, dumping drawers and bins, climbing out windows, putting items in electrical appliances, flushing things down the toilet, touching burners on the stove, inserting items in the electrical sockets, chewing on wires, crawling inside the washer and dryer and even playing with matches and lighters. Many of these hazards can be addressed utilizing a variety of safety precautions, remembering fire safety is a key point the report provides. The report also emphasizes the importance of keeping matches and lighters out of the reach of children, or better yet, keeping them locked up. Placing safety covers over the burners on the stove, and perhaps even covering the knobs so that a child cannot turn them on is important. Supervision of the children when an active fire is burning in the fireplace or when there is a barbecue with an open flame is critical. Many fire departments can provide stickers called tot finders for bedroom windows of children so that in the event of a fire the firefighters can locate a child’s bedroom. Though it may be difficult to teach an individual with ASD about the dangers of fire, it may be possible to teach them how to behave when it comes to fire safety.

The report further recommends utilizing photographs and words on cards to illustrate a smoke detector, fire drill, fire alarms or touching of a hot object as teaching techniques. Sometimes parents balk initially at the idea of having to label the house with photos or cards. Many state that the home is not a classroom; however, the home is indeed a natural learning environment, just like at school. The use of the visual aids can assist the child in understanding what they are not supposed to do and what they are expected to do. In addition to the visual aids, every home should have an exit plan. Having a plan for getting yourself and the autistic child out of your

home is necessary. This plan may require assistance from everyone in the home to ensure that the autistic child gets out, but teamwork is necessary. Practice this plan repeatedly, and work on having a second evacuation route because some exits may be blocked. Once outside, create a self-help network of neighbors, relatives and friends so that the autistic child can be placed in an environment where he or she can have time to distress.

In addition to the physical modifications made to the home, the report recommends introduction of behavior modification techniques to teach the child how to be safe and act appropriately in an emergency. In order for these fire safety measures to be affective constant demonstration needs to take place.

In 2006 the State of Maine, recognized the elevated risk level for individuals with autism. The Autism Society of Maine (ASM) reports that children with autism have died in fires when they retreated to a favorite hiding place; others have died when running and hiding from approaching firefighters. Along with the chaos of the incident, they also can become afraid of the appearance of the firefighter wearing his or her breathing mask. Their research states that it is essential that parents or guardians have an established preplan in the home to ensure that loved ones make it out of the fire.

When preparing fire prevention material for families with autism be sure to include the following information. Smoke detectors need to be placed in or near the autistic person's room, as well as every level of the home. Be sure that the alerting devices are tested and maintained in working order. Test them frequently so individuals with autism can become acquainted with sound. Teach the child the basic fire safety tips, stop, drop and roll, touching the door before opening it and having a meeting place outside. Assigning one family member from the home to be responsible to get the person with ASD out to a safe place should also be included in the plan.

Once the family and the autistic individual have escaped the house, it is critically important that a person stay with the autistic child to ensure that they do not re enter the home. This person assigned to stay with the autistic child needs to remember that individual with ASD may become overwhelmed with the lights, sirens, frantic activity and excessive stimuli and attempt to flee the situation. Be proactive with the fire safety plan and practice; provide the local fire department with as much information as possible to protect the autistic child. This would include filling out an informational sheet about the ASD child, his or her room location in the house and other information, such as where the child flees to if her or she is overwhelmed. Visiting the firehouse can often help the autistic child recognize a firefighter's equipment, and most of all the firefighters' protective gear. This should include having the firefighter wear his breathing apparatus tank and mask during the visit. Have the firefighter handle tools, flashlights and other items that firefighters accustomed to using during a fire. During the visit, have the firefighters get some of their emergency medical supplies out for display. Acquainting the autistic child with medical equipment, such as blood pressure cuffs, stethoscopes, oxygen masks, stretchers and the inside of an ambulance might prepare them incase of a medical emergency. If the ASD child is non-verbal, be sure to speak about laminated information cards while visiting the fire department. The laminated information cards contain basic question and answer sessions that can assist in a medical emergency.

The South Carolina Autism Society (SCAS) recommends the use of identification cards, bracelets or wallet cards. *Protecting the Child or Adult with Autism*, (SCAS) is an informational brochure that recommends that parents and caregivers should understand that people with autism have no identifying physical characteristics; their disability may not be immediately apparent to others. Police, firefighters and other people in the public may expect responses that the child or adult with autism may not be able to make. Everyone with autism is different. Each individual

with autism may respond differently to the same situation. Parents of autistic children know each child's strengths and weaknesses best. Undoubtedly, these are the best caregivers for the autistic person, however, being prepared for potential emergencies is extremely important when at home, or when the autistic child or family member is not accompanied by the usual caretaker. Identification bracelets, wallet cards or other identification can be critical for first responders. Some autistic child or adults may be unable to speak or speak well, and dependent on the situation, even the autistic person who can speak may be too frightened to answer any questions asked. The identification can assist the person trying to diagnose the patients and may help explain odd behaviors.

SCAS warns parents not to assume what was taught at school will be applied at home. Teaching what to do at home is much more difficult than at school. When preparing a safe home try to foresee where the autistic child or adult will go if confused or afraid. Many children without disabilities go to a safe place inside the home when a fire occurs and hide to escape the audible sound and confusion. The risk of a child with autism hiding during a fire is increased. Safeguarding the home without creating spaces that may trap the autistic child may be difficult. When evaluating the highest risk level of the autistic child or adult, escaping or fleeing could be the number one concern. Bars on windows and locks on interior doors may be utilized for the elevated risk of fleeing. However, bars on windows, and locks on interior doors can create problems for evacuating a home. Early notification devices to alert of a fire are essential items for an escape plan. The bars on windows and locks on interior doors need to be evaluated and alternative exits should be determined, including capability of removing or unlocking these devices quickly so they do not hinder the time it takes to evacuate the home.

Having a working smoke detector can be common in most homes, but a smoke detector in the home of an autistic person can complicate the task of evacuating. *Sensory Issues*, an article

written by Living-with-Autism.net, states that the body is constantly processing sensory information such as light, sounds, smells, touch and taste to gain information about your surroundings and the environment. The brain of the autistic person may interpret these signals differently than a person with no disabilities. Although the autistic person may correctly identify certain senses, at times the interpretation may become overwhelmed or neutral. At times there is just too much information coming in to be able to process all the signals. Of course, certain noises may be distressing for anyone but for a person with autism, noise may be a major challenge. The sounds of silverware at mealtime, chewing, clapping hands, fireworks, thunder, and smoke alarms may be among the culprits. However, a person with ASD may be so focused on something that the sounds may not register at all. Sensory issues may affect an autistic person their whole life. Families learn to adapt to needs and have learned ways to cope with unavoidable situations and sounds.

As an alternative to normal audible smoke alarms, the American Academy of Pediatrics (AAP) research; *Comparison of a Personalized Parent Voice Smoke Alarm with a Conventional Residential Tone Smoke Alarm for Awakening Children*, by Gary A. Smith, Mark Splaingard, John R. Hayes and Huiyun Ziang (2006), compared the normal household smoke alarm with a parent-voice smoke alarm. The study included children between the ages of 6-12 years old, and was based on the fact that conventional residential tone smoke alarms fail to awaken the majority of children during sleep. They compared personalized parent-voice smoke alarms with a conventional residential tone smoke alarm, both presented at 100 dB.

In their research the AAP randomly choose 24 health children for the study. These children were trained how to perform a simulated self-rescue escape procedure when they heard a smoke alarm. Each child's mother recorded a voice alarm message including, "first name of the child, wake up, get out of bed and leave the room procedures". For each child, either the voice or tone



smoke alarm was selected randomly and triggered during their sleep cycle. Out of the 24 children in program, 11 were males and the median age was nine years old.

The result of their research revealed that 23 of the 24 subjects awakened to the parent-voice alarm, compared to 14 out of 24 to the tone alarm. One of the test subjects did not awaken to either the voice or audible tone alarm. Twenty of the subjects that woke to the voice of their parents successfully performed the escape procedures within five minutes of the onset of the alarm, compared with only nine children in the tone alarm test. The median time to awaken a child with the voice alarm, once it activated, was twenty seconds. Those results were staggering when compared to the audible alarm, which took three minutes to wake the test subject. Being asleep at the time of a residence fire is a greater risk factor for a fire-related mortality than time of day. To survive an actual house fire using self-rescue, children not only need to awaken but also must be able to perform behaviors that require decision-making. The command from a mother or father's voice, including the message content, may be the direction the child needs to escape. The research concluded that fundamental changes in smoke alarm design is needed. Conducting further research may lower the risk of any child by utilizing the stimuli created by a voice alerting smoke alarm.

Alerting devices for fire protection come in numerous types and styles. Many provide different levels of protection. Talking smoke alarms are relatively new to the household consumer. The company KidSmart posted a report titled *Talking Smoke Alarm*. It pointed out that they are the only company that manufactures smoke alarms in which a parent can record a personalized message, instructing children to wake up and escape during an emergency. Studies show that a family member's-voice smoke alarm woke 100% of children in one minute or less. It also points out through their research that a familiar-voice smoke alarm helped children stay calmer in a chaotic situation.

After inspecting the home and making changes, a premise alert document could be helpful to your local fire or police department. The Pennsylvania (PA) Premise Alert posted a report titled *History of the Premise Alert*. It points out that the form came about when Police Chief Kevin C. McCarty, Sr. responded to a family's need for their son who carries a dual diagnosis of autism and mental retardation. The child had a tendency to escape from the home. The Chief met with the family, and by working together, came up with a document that listed the child's or adult's name, date of birth, home address, county, current physical description, sex, height, weight, eye color, hair color, scars or other identifying marks that would help with the identification of the individual. The individual's relevant medical conditions were obtained as well as prescription medications, sensory or dietary issues, emergency contact information, favorite attractions or locations where the individual may be found, favorite toys, and objects likes and dislikes.

The general idea of the program is nothing new for people with special needs, but the uniqueness of the program by working with police, fire, emergency medical services, 911 centers, educators and human service agencies benefit all parties.

A clear message is the most important part of education, especially with ASD. Being able to teach a child or adult with ASD is obtainable with good teaching materials and strategies. *Teaching Safety Skills to Children with Autism Spectrum Disorder: A Comparison of Strategies*, by Daiquire Crumrine (2003) researched fire and tornado safety skills of autistic children. This was based on whether children diagnosed with ASD who learned safety skills through traditional teaching methods transfer those skills into real work situation more effectively and efficiently than children who learned safety skills through Virtual Reality (VR). The author points out that a child diagnosed with ASD tends to be a visual learner because of their language processing deficits. Traditional teaching methods have focused on creating a visually structured learning environment through picture cues, comic strips conversation, social stories, role-playing and

video. This is depicted in the research as “Teaching As Usual” (TAU). This is compared to VR, a computer generated, interactive, three-dimensional environment. A key factor that the author points out is that theory behind utilizing VR is that the brain can process information more effectively when it is presented through combining sight, sound and touch. The research utilized eight children diagnosed with ASD. The participants were randomly assigned to two groups. After five weeks of training the children with TAU and VR, a conclusion was made. The author details out that all participants from both conditions of study made gains in their ability to transfer learned safety skills to real world situations. However, the participants in the TAU conditions learned more concepts, and retained more knowledge relating to safety skills when compared to participants in the VR training. The subjects in the TAU condition seemed to have been able to attend to relevant features during both the fire and tornado drills. They were able to understand the potential danger associated with each participant better than those in the VR condition. Parents of these children taught through TAU indicated that the participants were beginning to generalize learned fire safety skills to other environments. These participants were observed locating exit signs in public places and reciting the procedures to evacuate a building.

The results of this study suggest that material associated with TAU can be an effective means to teach children with ASD. The results from the authors study suggest those participants who received instruction via TAU performed as well as, or better than those who receive training via VR. The participants in TAU demonstrated a greater concept and skill base knowledge when compared to participants in the VR condition. The TAU students were able to repeat the learned script for both tornado and fire safety. The children were observed reciting the correct steps and procedures for evacuating a building on fire, pointing to exit signs and fire alarms.

In 2008, HCASG provided information about education setting, *What is a Good Educational Setting for a Child with Autism*. The information points out the definition of a good educational

program depend upon the needs of the individual child. Finding the child's "click" with their teacher and setting is important. Though this may take time, the parent and school educators can help. As a Special Education teacher, or a typical classroom teacher, each should have training and some experience working with autistic children before getting started. A teacher should be able to modify programs and curriculum to the autistic child's needs and strengths, based on the child's Individualized Educational Program (IEP). Keeping in mind, the individual's strengths and challenges, evidence should show learners are supported both academically and socially.

In summary, the literature review provided valuable information upon which to base a program to assist children and adults with autism. Research demonstrates that individuals with ASD are at a higher risk to suffer death or serious injury in a fire if proper fire prevention material is not provided though comprehensive materials. The research was guided by the findings of this specific literature review that drew a correlation between what affects children and adults with autism. By developing a home escape plan, practicing that plan, and knowing two ways out identifying what to do during a fire at home. Normal residential smoke detectors or audible alerting devices are needed; and are essential, for the safety of everyone in the home. By incorporating the following essential steps into the escape plan, a person assigned to the individual with autism, will ensure that the person does not run from the area or enter back into the burning structure. Finally, by utilizing visual aids, teaching and practicing the escape plan once, will increase the learning and safety of the individual with ASD. Identifying these things ensures that that the needs of the target audience are met and allows opportunities for adaptation.

### Procedures

The purpose of this research is to develop fire prevention material that meets the needs of families with autistic children. The following procedures were used in this research process. The first involved reviewing available literature at the National Fire Academy's (NFA) Learning

Resource Center in Maryland. Database searches focused on autism, special needs, ASD, disability and fires, alerting devices, fire prevention, techniques and practices for escaping a home and educational needs. The publications and articles reviewed provided a general idea in each specific area. The majority of current research data came from the World Wide Web using Google and Yahoo search engines.

The initial procedure provided questions and general reference ideas that were needed when meeting with Jane Grimes, (personal communication, February 9, 2009) in Noblesville, Indiana about this research. Mrs. Grimes is the President of HCASG, a program that helps families throughout Hamilton County and in Indiana, by guiding and directing families in a positive direction with hopes and intentions of improving the lives of all affected by autism. Mrs. Grimes is versed in helping children and families with autism, because she, herself has a ten year-old autistic child at home. Through Mrs. Grimes' understanding of the basic needs that autistic adults or children desire, she is able to identify areas of safety concerns through meetings and correspondence with the numerous families that she has helped. With Mrs. Grimes' help, she was able to assist in reviewing the prepared research questions.

The next process was to identify the estimated autistic individuals within the community. This process included checking with the U.S Census Bureau (2000) for relevant information that could identify people in the community that reported having a disability. The U.S Census Bureau does not separate people who have ASD from individuals with other diagnosed disabilities. Nevertheless, the census information showed that the community does have individuals and/or families dealing with some type of disability.

The U.S Census Bureau could not break down the different disabilities in the community therefore; numbers were tallied from existing data supplied by HCASG. In April 2009, the HCASG, *Helping Families in Central Indiana*, reported current numbers of autistic children in

the Noblesville area enrolled in local school systems: Sheridan Schools, 11, Hamilton Heights School, 43, Westfield Washington Schools, 117, Noblesville Schools, 141, Carmel Clay Schools, 248 and Hamilton Southeastern Schools, 347. The identification of the number of autistic children at risk in the community helped identify the research objective.

From the initial communication with Mrs. Grimes, the estimated population at risk in the community was identified and the development of the research questions for a questionnaire was developed.

With the at risk ASD population identified and the research questions written, Mrs. Grimes and others reviewed the questions and agreed that they were relevant and represented adequately the needs within the ASD community. The questionnaire was constructed and placed on the NFD website through an address link. The information was provided to members at the HCASG, at their meeting that took place in March 2009. Potential respondents were asked for their assistance in filling out questionnaire. Questions 1 through 17 were constructed with the forced answer format, along with room to add any other comments, or factors that directly affected them. The questionnaire was sent to 30 families who have children with autism. The basis for this number of recipients was simply to get a response from the target group. The intent was to get a sample of the special needs of autistic children, what factors affect autistic children dealing with a fire, what are the most effective alerting devices for families with autistic children, what evacuation techniques are practiced or recommended and what method of implementation for the curriculum is preferred. There was a response rate of 97 %. Twenty-nine of the thirty families responded to the questionnaire.

The next step in the research was to identify the special needs of autistic children. This included, but was not limited to the understanding of the different levels of ASD and the affects that it has on the child or adult. This process was to gain an understanding of the affects of the

disease on each person it afflicts. This analysis was based solely on the literature review of, *Howard the Fish*, (Shores, 2008), *Next Steps: What to do after the diagnosis*, (Pozdol et al. 2007), and *The Columbia Encyclopedia, Sixth Edition* (2008).

Next in the process, identifying the factors that affect autistic children when dealing with a fire was critical in the foundations for a successful fire prevention program. This process explored what factors could affect the individual with ASD, specifically when it comes to dealing with a fire. The understanding of an individual's reaction to smoke detector activation, the tendencies one would have when reacting to the event, what factors play into a successful escape and the level of risk the individual has once they have exited the structure are all important tasks. This procedure was completed through literature review of *Autism Information Sheet* (CDC 2009, April), *Autism Awareness for Responders* (Fire Engineering 2009, April), *Fighting Autism* (2008), *Autism Spectrum Disorder* (ASD, 2005) and *Safety in the Home*, (ASA, 2008). This process had very significant value. For example, the number one level of risk of an individual with ASD is the escape or flight risk. In many households, families protect their autistic child by placing locks on interior doors on the outside of the door, as opposed to the inside, as is traditionally found in homes. They place bars on windows or go as far as screwing the window shut. Though this process has lowered the highest level of risk that the individual has of escaping, it has increased the level of risk that an individual has when escaping a fire.

The next step in the research, was to discover what effective alerting devices are available for families with autistic children. This included but was not limited to strobe lights, vibration products, "normal" audible smoke detectors, combination units and clear voice activation smoke detectors. It evaluated the effectiveness of each unit individually and in combination. This analysis was based solely on the literature review of *Protecting the Child or Adult with Autism* (SCAS, 2007), *Comparison of a Personalized Parent Voice Smoke Alarm with a Conventional*

*Residential Tone Smoke Alarm for Awakening Children* (AAP 2006) and *Talking Smoke Alarm* (Kid Smart 2006).

The process of exiting the home is important no matter if there is someone with a disability at the home, or not. Having a plan in place and practicing that plan routinely is an excellent way to ensure everyone knows what to do when a fire occurs, and that everyone knows two ways out, along with the identification of a meeting place outside, are all steps that need to be understood by everyone in the family. This step in the process helped identify what techniques are recommended for evacuation. This process with an individual with ASD will be time consuming and demands consistency. This entails everything from having your furniture arranged the same way every day, to identifying a helper to assist the autistic child escape from the home during a fire. Other important responsibilities include familiarity with all doors and windows that lead outside, ensure that everyone in the home knows how to unlock the secured doors and windows, utilizing your neighbors to assist in such an incident, registering the autistic child or adult with local public safety officials, and once safely outside, assigning a person to stay with the individual to insure that reentry does not occur. This research review was found from *Tips for parents of children with ASD's* (ASC 2005), *Fire Safety for Individual with Autism* (ASM 2006) and *History of the Premise Alert Program* (Premise Alert System 2009)

The last, and most critical, procedure obtained from *What is a Good Educational Setting for a Child with Autism* (HCASG 2008), *Helping Families with Autism* (HCASG 2009) and *Teaching Safety Skills to Children with Autism Spectrum Disorder* (Crumrine 2006), includes information about proper teaching techniques, providing correct comprehensive teaching messages, both written and verbal, and what presentation methods are preferred to individual with ASD. This research aided in the understanding of current trends. It provided insight into the different methods in preparing individualized information.



The results of this applied research had some limitations. There is an adequate amount of data available, but the majority of data deals with numbers and symptoms of autism. This author could not find specific recommendations or a specific topic directly dealing with alerting devices. Nevertheless, the research available does state to survive a fire, there must be an early notification device. The quantitative and qualitative data, which is subject to change, has remained the same throughout the years, with the exception of the rapidly increasing number of individuals being diagnosed with autism. Another limitation was in reference to the sample size for my questionnaire. Though I met with a group of thirty families dealing with a family member having autism, a larger sample group could have provided a better evaluation of the target groups needs. Finally, if time and funding were available to compare a normal residential smoke alarm with a clear voice activated smoke alarm in the home of an individual with autism, it might possibly help identify a recommended alerting device for these families.

### Results

The purpose of this research is to develop fire prevention education material that meets the needs of families with autistic children. Five-research questions drove this research. The original questionnaire is included in this paper as Appendix A. A second copy of the questionnaire, with the recorded responses to each question, is attached as Appendix B.

The research focused on fire protection for families with autistic children. Of the families with an individual with ASD, 90% of the children could communicate, with 7% of the families reporting a non-verbal child. Of the 30 families that participated, 70% reported that their child could not stay by him or herself alone at home.

Of the following, what are the special needs of autistic children: escape/runner, behavior challenges, anxiety or the ability to comprehend and follow directions? The results showed that 34% of the families of an autistic child believe that the number one factor affecting their child

was anxiety. It showed that 32% of the respondents believed that their child's behavior challenges were an issue. The results also indicated that 26% of the families felt the number one special need of their autistic child was escaping or running. Only 5 % believe that their child's ability to comprehend and follow directions was an issue. These results provided a good foundation for the development of a program for the NFD.

Subsequently, the need to identify what factors affect autistic children when dealing with a fire resulted in 51% of respondents reporting the chaotic scene; loudness-sensory overload was a factor when dealing with a fire situation. Thirty percent of the respondents reported the smoke detectors inside the home caused their autistic child issues. Linking the results from these two answers resulted in a much higher measurable statistic in the number one fire affect on an autistic child. Thirteen percent of the respondents reported the lack of sensory stimulus to recognize the problem, while 5% reported that their autistic child would be drawn to, or run from the brightness of the fire.

With the above-listed information, we must determine the most effective alerting devices for families with autistic children. First, we must determine if the families have working smoke detectors. All but one family reported they do have a working smoke detector in the home. Ninety-six percent of the households established the groundwork for escaping a fire emergency successfully. The results from the other questions associated with this research are disappointing, but not surprising, once the families take the time to evaluate the level of risk of their child and his or her environment. Forty percent of the respondents indicated they do not know what type of alerting device is the most effective for their autistic child. However, 34% utilize normal audible smoke detectors in their homes. Relatively new to the market, 17% of the families utilize the clear voice activation smoke alarm, and less than 5% of the families utilize vibration products or units that combine an audible sound, strobe light and vibrating disk.

With the knowledge that families with an individual with ASD have early notification devices in their homes, the next step is to evacuate, including deciding how to escape and what process needs to be implemented to ensure the safety of the autistic child or adult. Is there an escape plan for the home? Fifty-three percent of the respondents reported yes, while another 46% reported no. Of those families that have a plan, 67% reported that they have never practiced the plan, while 28% reported practicing the plan once a year and 3% practice every six months. No one reported practicing the plan once a month. Should you experience a fire at home, what are the concerns for the autistic child during the fire? Forty-six percent report that the child would hide inside the home and not escape. Another 30% indicated that there would be no response from the child to the alerting device and 23% reported that the autistic child would escape or run outside the home and not stop running.

After escaping the home, and reaching the designated safe meeting spot, its time to call for help. Ninety six percent of the families report teaching the autistic child how to dial 911 for help. Only 3% of the families report that they don't bother with this education. They noted however, the reason they did not teach the child how to dial 911 was because the child was non-verbal.

With the current fire safety practices utilized by autistic families outlined, the process of identifying the preferred method of implementation was next. The respondents indicated that 59% preferred visual aids or pictures. Thirty-six percent preferred videos, while 4% preferred word only handouts.

The above information was utilized in establishing a base for developing fire prevention education materials that meets the needs of families with autistic children. It was important to obtain the opinions of the respondents with regard to what other alerting techniques were utilized at home; and what fire prevention messages or resources are used and are interior doors and

window secured. The respondents indicated earlier in this project that smoke detectors or loud noises cause chaos. However, when questioned about what stimuli is used to wake an autistic child or adult in the morning, 45% reported using an audible sounding clock or device. Twenty percent report the parent's voice wakes the child every morning, 17% turn on the lights, 14% utilize music, and only 2% use a vibrating device.

There are results that deal with "Tot-Finders", or other methods to identify the autistic child's room. Eighty six percent of the families report no use of a "Tot-Finder" or other method of identifying the child's room, and 13% reported currently using an identification method. When questioning those who did not utilize a method of identification, 62% indicated they would utilize a method of identification if it was provided, and 20% said they still would not.

As we have identified different techniques to lower the risk of a person with autism being injured or killed in a fire, the level of other risks associated with autistic children needs to be addressed by the family. One of those risk levels is the potential of the child running or escaping from the home. The identification of the number of families that lock or secure windows and doors so that the risk of escape is lessened is approximately 72%, while 28% of respondents do not utilize alternative locking techniques.

Families with an individual with ASD are always researching new techniques of protection. Ninety-six percent of the families stated they would attend a hands-on fire safety program at their local fire station geared towards their special need.

The conclusion of this research has shown that smoke detectors and having escape plan procedures are important criteria that need to be presented in a fire prevention message for families with autistic children. The fire prevention information can recommend an alerting device, provide pre-plan guidelines, both inside and outside the home, and provide a public safety information sheet.

## Discussion

The findings of the research were beneficial in gathering criteria that needed to be placed in a fire prevention educational program for families with autistic children. The literature review research compared with the findings of the questionnaire created some concern about the target audience. With the multi-levels of risk that a family with an autistic child has to deal with, do they prepare themselves adequately for the risk of a fire emergency and do they understand what is best for their safety with regards to alerting devices and having an escape plan.

Identifying the estimated population in our community through the U.S Census Bureau and the HCASG was beneficial. The NFD may educate a significant number of people in our community, but the number of people that are at a high risk for death or serious injury from a fire, such as children and adults with autism, are not pursued as a potential target audience.

The research documentation references anxiety as the number one special need of an autistic child when dealing with a fire event. It also pointed out, that even though this can create chaos and anxiety, 96% of the families have residential smoke alarms. They know they need a smoke detector; however, most would like to have something that provides the same type of protection but lessens the chaos and anxiety for the autistic child. This event, though significantly lower on the overall risk scale, can become deadly even with a small fire event.

The results from the questionnaire and the literature review both pointed out that having an escape plan is very important, but practicing the plan is the key to success. Fifty-three percent of the respondents pointed out that they have a plan, but 67% of the families point out that they only practice the escape plan once a year. With the significant number of families not practicing the plan, the chance of being prepared and successfully escaping a fire event does not seem probable. Families with autistic children are aware that keeping the interior of their home relatively the same helps the child comprehend normal everyday tasks because of repetitiveness.

of their daily routine. If they would apply that same concept to their fire escape plan, by walking through the primary escape route, making sure that all exits are accessible to all members of their household, defining the family meeting place, calling 911, and assigning a person to stay with his or her autistic child so re-entry does not occur, they can be prepared for a fire event.

The research has provided insight into the number of families that would like a public safety official to provide an information sheet that could be registered with 911 communications centers, identifying the house as the home of an autistic child or adult. This was very encouraging, 96% of those families want public safety officials to have knowledge that they may need assistance in an emergency.

A critical method of delivering the fire prevention message was substantiated in the questionnaire. Providing the message in text along with a clear visual aid of the intended message, audiences are provided multiple ways of comprehensions. The ability to provide a video message would just enhance this comprehension, but there are no videos that this author could find, that focused on fire prevention for families with autistic children. There were many videos designed for first responders, along with informational videos about the disease, but none, in my opinion, illustrated the tactics focusing on fire safety in the home.

A quantitative measure can be provided through this research that can provide criteria for a fire prevention program for families with autistic children. The limitation was the lack of a more comprehensive questionnaire. The information learned since disbursing this questionnaire would have produced a more in-depth search in the adaptive problem. This knowledge may have allowed creation of more questions, such as; why they chose their specific alerting device, why do they not practice their plan at home, and possibly stating where the majority of the education of fire prevention comes from. This additional information could have provided a better understanding of the education that is available at that time.

Another limitation was the fact that while researching fire prevention material for families with autistic children, the information is lumped into fire prevention for people with disabilities. It is very general, not disease specific. The National Fire Protection Association (NFPA), along with Fire Protection Publications (FPP) are organizations that lead in providing information that lower the risk of injury or death in a fire emergency. But, they have not researched fire protection for the number one leading diagnosed disease in our country.

It is important that the NFD move forward in putting together fire prevention criteria that meets the needs of families with autistic children. If organizations choose not to evaluate community risk, we will continue to use yesterday's methods to address today's problems.

### Recommendations

The problem statement that this research addressed was that the NFD does not have education criteria to base a fire prevention program for families with autistic children. The purpose of this research is to develop fire prevention education material that meets the needs of families with autistic children.

The research revealed that children with autism are at higher risk of injury or death when it comes to a fire occurring in their residence. Therefore, it is recommended that the NFD provide fire prevention educational material that meets the needs of individuals with ASD.

Administratively, providing a standard operation guideline (SOG) for the department will provide current safety precautions that could lower the risk.

The fire safety material should include having a working smoke alarm, no matter what type it is; a working smoke detector is the first step for survival. This recommendation also should include the practice of changing the batteries in the unit and refer to the manufacturer's recommendations when it comes to replacing the batteries. This recommendation also should include escape plan practices, techniques and procedures to follow once outside the home.

Families with autistic children in our community need to be identified. The information from the 2000 U.S Census and HCASG gives an approximate number of citizens with the disability; however correspondence with doctors, schools or business by encouraging them to contact the fire department for fire prevention material for their autistic patients, students or employees should be performed.

Finally, this information should be placed in a brochure that provides not only the general fire prevention tips at home, but includes larger pictures for learning techniques, graph paper for drawing an escape plan, a registration form so families can alert first responders that a person on the autism spectrum lives in the community, and let the families know that emergency stickers are available at the local fire department if they desire.

The purpose of this research has been met, but it is recommended that the NFD keep up with the current safety measures that affect the children and adults with autism. The fire prevention material provided by the NFD should change, if necessary, if the research changes to lower the risk of individuals with ASD. By keeping up with the current trends in providing accurate and substantial fire prevention material for families with autistic children, lives can be saved.



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## Appendix A

### Fire Prevention Education Criteria that meet the needs of families with Autistic Children

#### Questionnaire

1. Is your child verbal?
  - a. Yes
  - b. No
2. What is the special need of your autistic child(ren), in your opinion?
  - a. Escape/Runner
  - b. Behavior challenges
  - c. Anxiety
  - d. Ability to comprehend and follow directions
3. Do you have working smoke detectors?
  - a. Yes
  - b. No
4. Is your child able to stay alone at home?
  - a. Yes
  - b. No
5. What factors affect your autistic child, or yourself having autism, with fire?
  - a. Smoke detector sounds
  - b. Drawn to/run from brightness of fire
  - c. Lack of sensory stimulus to recognize problem
  - d. Chaotic scene, loudness-sensory overload
6. What are the most effective alerting devices for your child(ren) with autism?
  - a. Strobe lights
  - b. Clear voice activation smoke alarms
  - c. Vibration products
  - d. "Normal" audible sounds
  - e. Combination units (Audible sounds, Strobe lights, Vibration Disk)
  - f. I don't know
7. Do you have an escape plan for your home?
  - a. Yes
  - b. No
8. How often do you practice your escape plan?
  - a. Once a month
  - b. Once every six months
  - c. Once a year
  - d. Not at all

9. Do you place locks or secure shut windows and doors so that the risk of escape is lessened?
  - a. Yes
  - b. No
10. What evacuation concerns do you have today, should you experience a fire at home?
  - a. Escape/Runner outside the home
  - b. Hide inside the home, no escape
  - c. No response to the alerting device for a fire
11. What stimuli are used to wake an autistic child, or adult, in the morning?
  - a. Audible sound
  - b. Music
  - c. Vibration
  - d. Lights
  - e. Parents
12. What teaching aids are effective?
  - a. Hand outs
  - b. Video
  - c. Visual aids (Pictures)
  - d. Fire drills at home
13. Do you utilize a window decal, "Tot-Finder" or other method to identify your autistic child(ren)'s room?
  - a. Yes
  - b. No
14. Would you utilize a window decal, "Tot-Finder" to identify your autistic child (ren)'s room?
  - a. Yes
  - b. No
15. Do you teach you child(ren) how to dial 911 in case of an emergency?
  - a. Yes
  - b. No
16. Would you attend, with your autistic family member, a hands-on fire safety program at your local fire station geared toward your special needs?
  - a. Yes
  - b. No
17. Would you like you local public safety official to provide an information sheet that could be registered with a 911 communications center that would identify your home as having autistic family members?
  - a. Yes
  - b. No

## Appendix B

## Fire Prevention Education Criteria that meet the need of families with Autistic Children

## Questionnaire Results

1. Is your child verbal?	
a. Yes	27
b. No	3
2. What is the special need of your autistic child(ren), in your opinion?	
a. Escape/Runner	14
b. Behavior challenges	17
c. Anxiety	18
d. Ability to comprehend and follow directions	3
3. Do you have working smoke detectors?	
a. Yes	29
b. No	0
4. Is your child able to stay alone at home?	
a. Yes	4
b. No	21
5. What factors affect your autistic child, or yourself having autism, with fire?	
a. Smoke detector sounds	13
b. Drawn to/run from brightness of fire	2
c. Lack of sensory stimulus to recognize problem	6
d. Chaotic scene, loudness-sensory overload	22
6. What are the most effective alerting devices for your child(ren) with autism?	
a. Strobe lights	0
b. Clear voice activation smoke alarms	6
c. Vibration products	2
d. "Normal" audible sounds	12
e. Combination units (Audible sounds, Strobe lights, Vibration Disk)	1
f. I don't know	14
7. Do you have an escape plan for your home?	
a. Yes	17
b. No	15
8. How often do you practice your escape plan?	
a. Once a month	0
b. Once every six months	1
c. Once a year	8
d. Not at all	19

9. Do you place locks or secure shut windows and doors so that the risk of escape is lessened?
  - a. Yes 21
  - b. No 8
10. What evacuation concerns do you have today, should you experience a fire at home?
  - a. Escape/Runner outside the home 7
  - b. Hide inside the home, no escape 14
  - c. No response to the alerting device for a fire 9
11. What stimuli are used to wake an autistic child, or adult, in the morning?
  - a. Audible sound 16
  - b. Music 5
  - c. Vibration 1
  - d. Lights 6
  - e. Parents 7
12. What teaching aids are effective?
  - a. Hand outs 2
  - b. Video 16
  - c. Visual aids (Pictures) 26
  - d. Fire drills at home 0
13. Do you utilize a window decal, "Tot-Finder" or other method to identify your autistic child(ren)'s room?
  - a. Yes 4
  - b. No 25
14. Would you utilize a window decal, "Tot-Finder" to identify your autistic child (ren)'s room?
  - a. Yes 18
  - b. No 6
15. Do you teach you child(ren) how to dial 911 in case of an emergency?
  - a. Yes 26
  - b. No 1
16. Would you attend, with your autistic family member, a hands-on fire safety program at your local fire station geared toward your special needs?
  - a. Yes 28
  - b. No 1
17. Would you like you local public safety official to provide an information sheet that could be registered with a 911 communications center that would identify your home as having autistic family members?
  - a. Yes 29
  - b. No 0

## Appendix C

### NOBLESVILLE FIRE DEPARTMENT SOG

#### Public Education Guidelines

##### Purpose:

To establish an effective general operational guideline for fire prevention education material for families with autistic children. To define the responsibilities of the Fire Prevention Bureau and firefighter's approach to providing safety material for individuals who are autistic.

##### Definitions:

Autism: A complex developmental disability that typically appears during the first three years of life and affect a person's ability to communicate and interact with others.

##### General Guidelines:

- Provide the families with autistic children with the appropriate hand out material that is designed for individual with autism.

##### Autism, material outline:

- Ensure an early notification device is installed in the home.
- Early notification device testing
- Changing the battery
- Create a home escape plan
- Create a plan for outside the home, once the escape has been made
- Practice the plan, monthly
- Home fire hazards
- 911 communication

Appendix D



**NOBLESVILLE FIRE DEPARTMENT**

**Fire Safety & Prevention Information for  
People of Loved Ones with Autism**

Information Provided By: Noblesville Fire Department and Ohio Insurance Institute



# Fire Prevention Material for Children & Adults with Autism

Research shows that people with disabilities have a higher risk for being injured or killed in a fire. So, this information will help you:

- Make sure your smoke alarm is working
- Create and practice a home escape plan
- Reduce fire risks in your home



Fire prevention at the Noblesville Fire Department is a duty that our organization strives to provide with high standards. Prevention of fires before they occur is more cost effective to citizens of Noblesville than fire suppression efforts after a fire occurs. Educating our citizens about the importance of proper alerting devices, escape plans, contacting local 911 communication centers, the stop, drop and roll program, and the importance of being prepared in a disaster situation are educational topics we provide.

# Install Smoke Alarms

You need at least one smoke alarm outside every sleeping area and on every level of your home. The most dangerous fires occur when you are sleeping. The smoke alarm should detect the smoke before it reaches your sleeping area and wake you up.



Alerting devices for fire protection come in numerous types and styles; many provide different levels of protection. No matter what your choice of alerting device the Noblesville Fire Department highly recommends you have a working smoke detector on each level of your home.

[www.firstalert.com](http://www.firstalert.com)

Model # SA302 dual sensor smoke detector.



Talking smoke alarms are fairly new to the household consumer. Studies have shown that voice activated smoke alarm is very effective in waking children from their sleep.

<http://www.safemart.com/Smoke-Detectors/Signal-One-Vocal-Smoke-Alarm-012504.htm>

## **Test the Alarm Every Month**

You need to test your smoke alarm every month. Place a reminder on your calendar on a consistent day. Get in the habit of checking your smoke alarm every month. Unless your alarm has working batteries, it won't work, and it won't save your life. To test the alarm, push the test button on the smoke alarm for 20 seconds. Look to make sure the strobe light is flashing and the bed shaker is moving. Consider marking your calendar or PDA to alert you to the monthly testing schedule.

## **Change the Batteries Every Year**

Change both batteries once a year. Change them in the fall when you set your clocks back. If your alarm begins to chirp and there is no fire, you need to change both batteries.

## **Change the Alarm Every 10 Years**

Smoke alarms are good for 10 years. After 10 years, you must buy and install a new smoke alarm. Place a label on the alarm. Write the date the alarm was installed on the label. Make sure the label does not cover any vents on the smoke alarm.

## **Know Your Smoke Alarm**

Your smoke alarm has three parts. The parts work together. The three parts are a smoke alarm, a bed shaker, and a strobe light. The smoke alarm is outside your sleeping area. It detects the smoke. It sends a signal to the strobe light and the bed shaker. The strobe light flashes and the bed shaker moves to wake you up.

## **Consider a Fire Sprinkler System**

Home fire sprinkler systems give you the best level of safety. The system triggers quickly and puts out the fire before it can spread. Also, the system puts out the fire before anyone in the home can be affected by inhaling toxic smoke, which is the number one cause of deaths in a fire.

## **For more information, go to**

[www.homefiresprinkler.org](http://www.homefiresprinkler.org)  
or call 1-888-635-7222

## Create a Home Escape Plan

A home escape plan is your way out of your home if you have a fire. After you plan your escape, all family members should practice the escape plan every week, month or as need for it to be successful. The more you practice your escape plan, the more prepared you will be to take action in an emergency.

### How Do I Create a Home Escape Plan?

- Draw a floor plan of your home on a large sheet of paper or use grid paper (*Included*)
- Check to make sure you have included every door and window that you can use as an exit.
- Draw all outdoor features or possible obstacles that might keep you from escaping through windows and doors.
- Draw arrows to show the best way out of each room.
- Draw arrows in blue to show the second way out of each room.
- Choose a meeting place in front of your home and mark it on the escape plan.
- Practice the escape plan using the best way out of your sleeping area.
- Practice the second way out of your sleeping area.
- **Note:** Know both ways out, so you can escape. Make sure that everyone in your family can follow both ways out. You may need to assign a person in the household to help the autistic child or adult outside.
- Arrange to call 911 or your local emergency number from a neighbor's house.
- Update the plan as needed.
- Designate a person to stay with the autistic child or adult once outside so they do not re-enter the home.
- Once outside, you need to arrange with a neighbor to move the autistic child or adult inside so that they have an opportunity to calm down after the event.

## What Other Things Should I Do?

Please, include your autistic child or adult in your escape plan. Research has shown that they can learn the events of escaping a fire if they practice.

Clear all escape routes. Remove all items from halls, any doors and windows, and sleeping areas.

Make sure that your house number is clearly visible from the street. Consider painting your house number on the street curb. If you live in an apartment, your landlord should ensure the apartment number is visible from the parking lot and that all building numbers are visible from a distance.

Registered with the local public safety agencies, informing them that an autistic child or adult lives in the home. (*Included*)

## Practice Your Escape Plan

You and your family must practice your escape plan before the emergency. Once the alarm sounds, you only have a few minutes to escape, so you must be prepared. The more you plan and practice, the more prepared you will be in an emergency.

**Practice \* Practice \* Practice**

## **Find Two Exits from Each Room**

Know all doors and windows that lead to the outside. Make sure all family members, even children, can open them easily. If you have any security bars on the windows; or place locks on interior doors, make sure they have an emergency release and everyone can open the bars quickly. If you have a multi-level home, consider sleeping on the ground level. Get an escape ladder for bedrooms on the second floor. Make sure that the ladder fits the window. Choose a “Meeting Place”, outside in front of your home.

## **Practice Your Escape Plan**

Practice your escape plan regularly. For sleeping areas on the second floor, practice setting up the ladder. But do not climb down the ladder. Climb down the ladder only in emergency situations. If you have a service animal, practice your escape plan with your animal. Train your animal how to respond to the alarm when you test it every month. However, because you test it every month, your animal may become accustomed to the sound. So, it is important for the animal to realize that the alarm means danger and the animal should alert you. You should also practice your escape plan without your service animal. If the animal is trapped inside your home, tell the firefighters when they arrive.

## **In a Fire**

Escape must be immediate. Do not wait to be rescued. If there are closed doors between you and the exit to the outside (such as a closed bedroom door), you should feel the door or the doorknob with the back of your hand for heat if it is hot, do not open it. Use your second way out.

If the door does not feel hot, open it with caution. There still may be smoke and heat on the other side. If you open the door and find smoke or heat, close the door, and use your second way out. If the path to the outside is clear of smoke, or if you can crawl under the smoke, move quickly to the exit.

## **Modify Your Plans**

You are the expert on your own abilities and needs. You must plan how to give instructions to emergency responders when they come. Instructions should be quick and to the point. You will only have time to relay the most important information. Call the fire department using a non-emergency number before an emergency. They may be able to store information about your needs. For example, you can tell them that your house has one person who is hard of hearing in the back bedroom on the first floor. Remember that you will contact 911 or your local emergency number from a neighbor's house. Practice communicating with your neighbors about an emergency. Include this step when you practice your escape plan.

# Reduce Fire Risks

## Prepare to Cook

- Cook when you are alert. Do not cook if you are drowsy or if you feel the effects of alcohol, medication, or other drugs.
- Do not wear loose-fitting clothes when you cook.
- Roll your sleeves over your elbows when you cook.
- Keep all items that can burn away from the stove.
- Do not hang a towel on the oven handle.

## While You Cook

- Never leave a stove unattended while cooking. Turn off the stove if you must step away, even for a moment.
- Keep children and pets away. Create a three-foot safe-zone around the stove.
- Always use a pan with a lid that fits properly.
- Keep a lid nearby to smother any flames.
- Keep handles of the pans turned in.
- Use a timer to remind you when your food is ready. As soon as the timer goes off, turn off the stove.
- Keep the area around your stove clean.
- Do not allow grease to build up around the stove. Built-up grease can catch on fire

## If There is a Fire

- If a pan of food catches on fire, position the lid in front of you and then slide the lid over the pan. Keep the lid between you and the fire, as if it were a shield. Slide the lid on top of the pan. Turn off the burner, and then slide the pan to a cooler surface.
- **Danger!** Never use water to put out a grease fire.



## Microwave

- Microwaves are intended only for food preparation.
- Never put any metal, tin foil, twist-ties, or silverware in a microwave.
- Only use microwave-safe containers.  
Microwaves can melt some plastic containers or cause some ceramic and glass containers to break.
- Microwaves heat unevenly, and your food will continue to cook even after the microwave stops. Open all containers carefully to avoid steam burns. Make sure that the door to the microwave always seals properly.
- Do not use the microwave if the door does not close.
- If you have a fire in the microwave, do not open the door. Turn the microwave off. Call 911 or your local emergency number. Before you use the microwave again, have it serviced to make sure it works properly.

## Smoking

- Smoking and smoking materials are the number one cause of fatal home fires. If you smoke, you and your family are at greater risk for fire, burns, and death.
- Never smoke in bed. If a cigarette fire starts in your bed, you are too close to the fire and may not be able to escape.
- Never leave a lit cigarette. Put it out.
- Do not smoke when drinking alcohol or taking prescription medication that makes you drowsy.
- Do not smoke in carpeted areas.
- Do not smoke in upholstered chairs. Smoke at a table. Do not use a tablecloth. Keep flammable items (such as napkins) away.
- Keep the smoking area free of clutter.
- Keep lighters and matches where children cannot get them.
- Always use ashtrays that are deep and will not tip over.
- Only use ashtrays to dispose of cigarettes. Do not put trash in them.
- Do not overfill ashtrays.

- Before you dump cigarette butts in a trash can, pour water on the butts.
- Never smoke in areas where oxygen is in use.

## Candles

- Always trim the wicks to 1/4 of an inch before you light them. Long wicks create more smoke, create higher flames, and cause candles to burn unevenly.
- Always put candles on a holder that will not burn. Move them away from things that can burn (curtains, furniture).
- Put candles in sturdy holders that are big enough to collect wax and will not tip over.
- Keep candles at least 4 inches apart. If they are too close together, they may melt each other's wax or burn improperly.
- Make sure that children or pets cannot reach candles or knock them over.
- No burning candle is safe. Never leave candle unattended. Even jar candles are unsafe because the jar can break and the wick can ignite other materials.
- Blow out candles when you leave a room.
- Do not use candles in your bedroom. You may fall asleep and forget about them. About half of all home fires that involve candles start in the bedroom.
- No electricity, always use a flashlight, No candles.

## Electrical Appliances

- Immediately unplug any appliances that spark, smell unusual, or overheat. Replace them or have them professionally repaired.
- When an electrical cord frays or cracks, replace it.
- Do not put electrical cords or wires under rugs.
- Make sure that lamps and night lights do not touch any fabrics or furniture.
- If you use an extension cord, unroll it all the way to keep it from retaining heat. Do not leave an extension cord coiled in any way.

- If you have young children in your home, cover the unused outlets with plastic covers.
- Do not overload outlets.
- Make sure that you place plugs in the proper type of outlet.
- Polarized plugs (one prong is wider than the other) require polarized outlets.
- Three-prong plugs require outlets with three holes to properly ground the plug.
- Never force a plug into an outlet when it will not fit.
- If a fuse blows or a circuit breaker trips, do not just replace or reset it. Find out what is overloading the system, and correct the problem. If the overload is not readily apparent, have a licensed electrician check out the circuit

## Fireplaces

- Keep anything that can burn at least 3 feet away from heat sources.
- Do not wear loose-fitting clothes near open flames.
- Use old, dry wood in your fireplace. New or wet wood is more dangerous.
- Use a fire screen.
- Every year, at the beginning of winter, inspect your chimney for cracks or obstructions.
- Once a year, have a professional clean your fireplace.

## Space Heaters

- Space heaters are a fire risk.
- Use only space heaters with a UL label.
- Make sure that your space heater has an automatic switch to turn it off if it falls over.
- Give your space heater 3 feet of space in all directions.
- Keep furniture, bedding, and clothes 3 feet away from space heaters.
- Use the space heater for short periods of time.
- Do not go to bed with the space heater on.
- Always unplug your space heater when not in use.

# NOBLESVILLE FIRE DEPARTMENT

## AUTISM SPECTRUM DISORDERS: 911 REGISTRY FORM

_____ M__ F__	
Name _____	(Nickname) _____
D.O.B. _____	
_____	
City _____	Phone _____
_____	
Parent/ Guardian/Caretaker/Other (Please Specify) _____	
_____	
Phone _____	Work # _____
Cell # _____	

### SECONDARY EMERGENCY CONTACT:

Name _____	Phone _____
Behaviors, Habits, Fears: _____	
_____	
Favorite attractions and locations where person may be found: _____	
_____	
Best communication method in crisis: _____	
Wears ID jewelry, tags in clothing, etc. NO____ YES ____	
Where can it be found? _____	
Critical medical information: _____	
_____	

### CONTACT PERSON TO KEEP INFORMATION UPDATED:

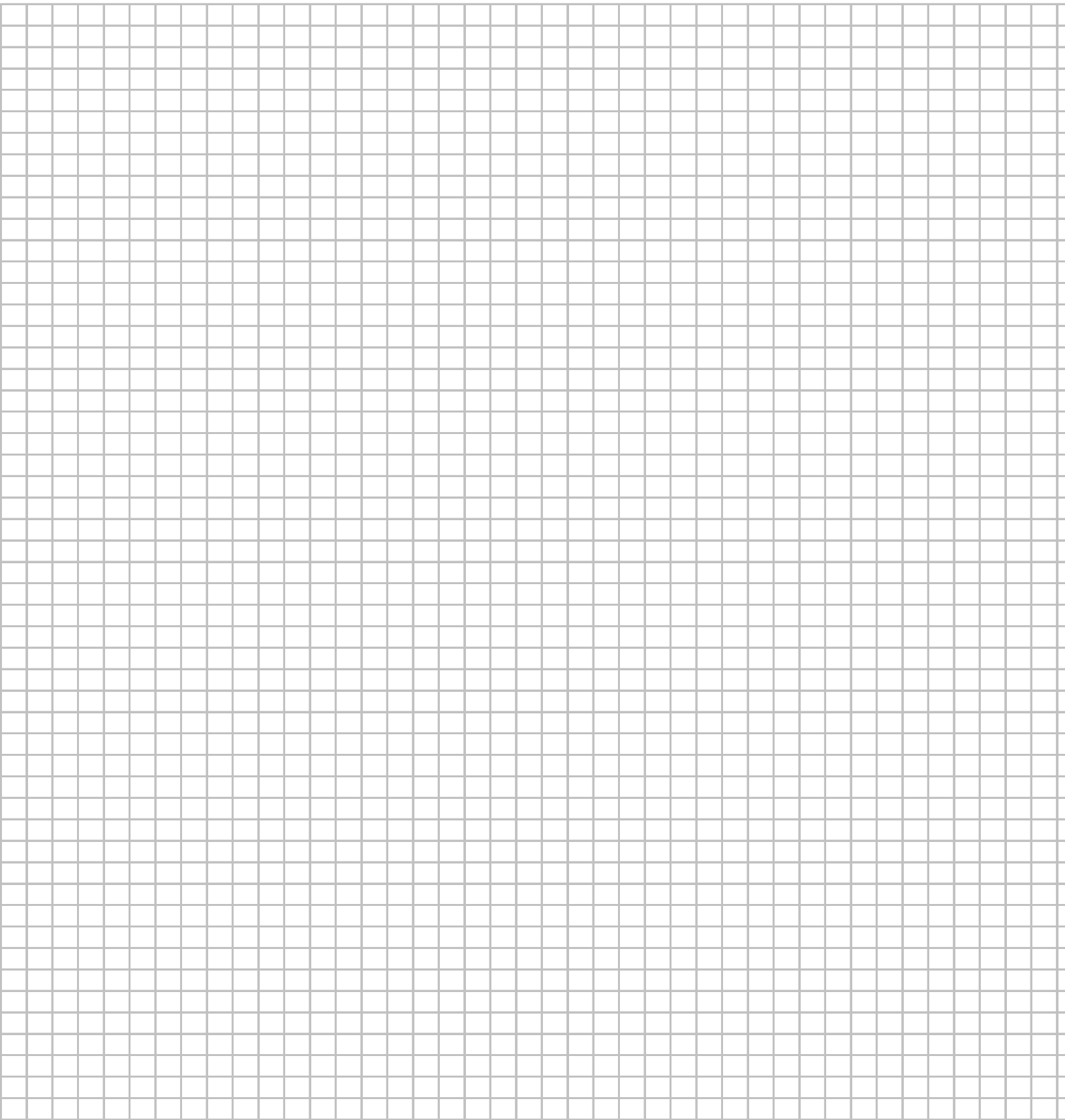
Name _____	Phone _____
-----	

### PERMISSION FOR DISCLOSURE

I, \_\_\_\_\_ parent/guardian/caretaker of \_\_\_\_\_  
 Give permission for information regarding him/her to be given over the dispatch radio.

Signed \_\_\_\_\_ Date: \_\_\_\_\_

Turn this document into your local police or fire agency



If your clothes catch fire.



Ohio Department of Commerce  
Division of State Fire Marshal  
1-888-243-0305







# KNOW TWO WAYS OUT!



Ohio Department of Commerce  
Division of State Fire Marshal  
1-888-243-0305





**CRAWL UNDER SMOKE**

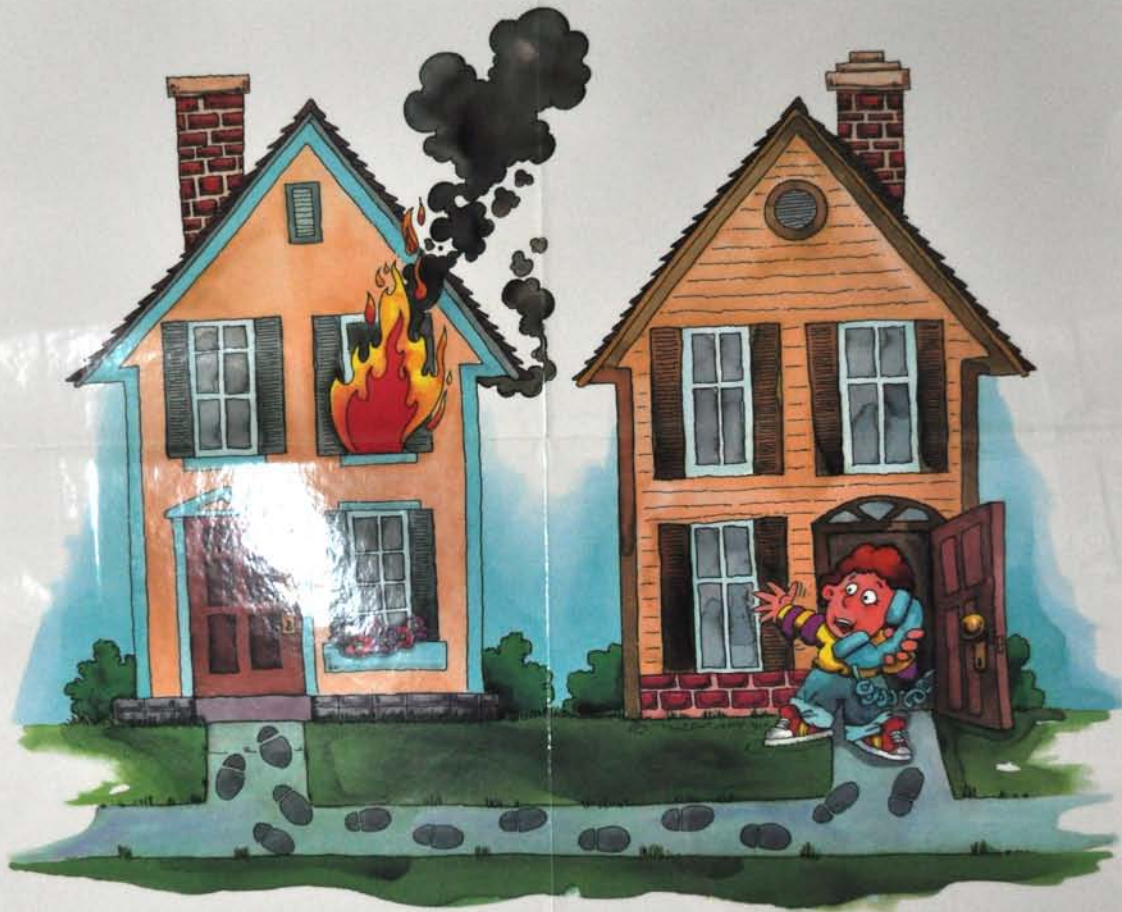
Provided as a public service by



Representing Ohio's property/casualty  
insurance industry



# Call the fire department from a neighbor's house!



**FIRE DEPARTMENT EMERGENCY NUMBER**

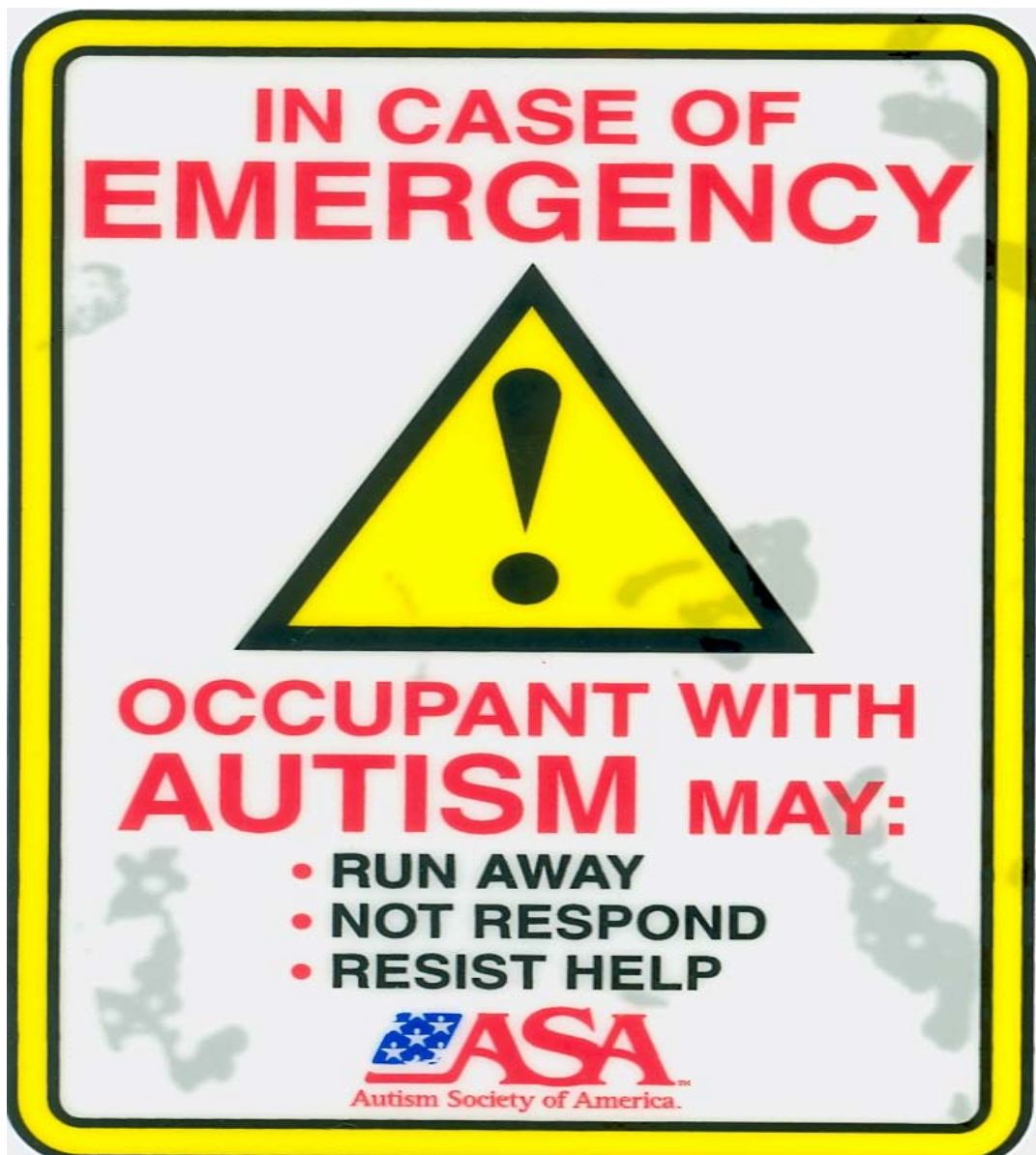
911

Provided as a public service by



Representing Ohio's property/casualty  
insurance industry

**If you desire to identify your home or vehicle about the occupant inside has autism, contact your local fire department and ask for a emergency sticker.**



**Always remember that you are the expert on your abilities and needs. If you know what to do in a fire, you can lower your risk. Installing a working smoke alarm in your home lowers that risk. Test it every month and change the unit out every 10 years. Practice that escape plan, make changes as needed and make your home fire safe.**



**The mission of the Noblesville Fire Department is to prevent harm by mitigating the effects of natural and manmade disasters. High quality cost efficient fire prevention, public education, fire suppression, advanced emergency medical services, and rescue response are provided while maximizing firefighter safety.**